

AMENDMENT

Kindly amend the specification, without prejudice, without admission, without surrender of subject matter, and without any intention of creating any estoppel as to equivalents, as follows.

IN THE CLAIMS:

Kindly amend the claims, without prejudice, without admission, without surrender of subject matter, and without any intention of creating any estoppel as to equivalents, to read as follows:

1-27. (Canceled)

28. (Currently amended) A transformed nonpathogenic ~~gene-delivery vector of an~~ anaerobic bacterium of the genus Bifidobacterium, ~~wherein the bacterium~~ which grows under anaerobic conditions and is transformed with a cloning vector, wherein said cloning vector:

(1) ~~produces a recombinant in vitro with a~~ has DNA encoding a protein (a) with anti-tumor activity, or a protein (b) that converts a precursor of an antitumor substance (P) into an antitumor substance, and a promoter and terminator functioning in a bacterium of the genus Bifidobacterium;

(2) ~~proliferates~~ can replicate in a bacterium belonging to the genus Bifidobacterium,

(3) ~~transforms~~ can transform a bacterium belonging to the genus Bifidobacterium, and

(4) has a selective marker that can detect specifically a bacterium belonging to the genus Bifidobacterium transformed with the cloning vector.

29. (Currently amended) The ~~gene-delivery vector~~ bacterium of the genus Bifidobacterium according to claim 28[[,]] having at least one selectable marker ~~from chemical resistance, wherein the selectable marker is~~ selected from the group consisting of ampicillin resistance, tetracycline resistance, neomycin resistance or kanamycin resistance, nutrition requirements [[or]] and medium selection.

30. (Currently amended) The ~~gene-delivery vector~~ bacterium of the genus Bifidobacterium according to claim 28, wherein the cloning vector is an E.coli-Bifidobacterium shuttle vector.

31. (Currently amended) The ~~gene-delivery vector~~ bacterium of the genus Bifidobacterium according to claim 30, wherein the cloning vector has a promoter and terminator

involved in expressing a gene encoding a histon-like DNA binding protein of a bacterium of the genus Bifidobacterium, and wherein a DNA encoding the protein (a) with anti-tumor activity, or the protein (b) that converts a precursor of an antitumor substance (P) is integrated in a downstream of the promoter.

32. (Currently amended) The ~~gene-delivery-vector~~ bacterium of the genus Bifidobacterium according to claim 31, wherein the promoter and terminator are derived from Bifidobacterium Longum [[is]] and are involved in expressing a gene encoding a histone-like DNA binding protein ~~derived from Bifidobacterium Longum~~.

33. (Currently amended) The ~~gene-delivery-vector~~ bacterium of the genus Bifidobacterium according to claim 32, wherein the promoter and terminator [[is]] are a DNA located at nucleotides 1 to 192 of SEQ ID No: 1, and a DNA located at nucleotides 472 to 600 of SEQ ID No: 1, respectively.

34. (Currently amended) The ~~gene-delivery-vector~~ bacterium of the genus Bifidobacterium according to claim 33, wherein the cloning vector is pBLES100.

35. (Currently amended) The ~~gene-delivery-vector~~ bacterium of the genus Bifidobacterium according to claim 28, wherein the bacterium belonging to the genus Bifidobacterium is selected from the group consisting of Bifidobacterium adolescentis, Bifidobacterium longum, Bifidobacterium bifidum, Bifidobacterium pseudolongum, Bifidobacterium thermophilum, Bifidobacterium breve, and Bifidobacterium infantis.

36. (Currently amended) The ~~gene-delivery-vector~~ bacterium of the genus Bifidobacterium according to claim 35, wherein the bacterium belonging to the genus ~~Bifidobacterium~~ Bifidobacterium is Bifidobacterium longum.

37. (Currently amended) The ~~gene-delivery-vector~~ bacterium of the genus Bifidobacterium according to claim 28, ~~wherein the gene-delivery produces the~~ producing a protein (b) that converts a precursor of an antitumor substance (P) into the antitumor substance.

38. (Currently amended) The ~~gene-delivery-vector~~ bacterium of the genus Bifidobacterium according to claim 37, wherein the protein (b) that converts a precursor of an antitumor substance (P) into the antitumor substance is a protein selected from the group consisting of cytosine deaminase, nitroreductase, herpes simplex virus type 1 thymidine kinase and  $\beta$ -glucuronidase.

39. (Currently amended) The ~~gene delivery vector~~ bacterium of the genus *Bifidobacterium* according to claim 38, wherein the protein (b) that converts a precursor of an antitumor substance (P) into the antitumor substance is cytosine deaminase.

40. (Currently amended) The ~~gene delivery vector~~ bacterium of the genus *Bifidobacterium* according to claim 28, wherein the ~~gene delivery vector~~ bacterium of the genus *Bifidobacterium* is *Bifidobacterium longum* 105A/pBLES100-S-eCD, represented by the accession number FERM BP-7274.

41. (Currently amended) A pharmaceutical composition for treating a solid tumor, comprising the ~~gene delivery vector~~ bacterium of the genus *Bifidobacterium* according to ~~any one of claims~~ claim 28.

42. (Currently amended) A kit of a pharmaceutical composition for treating a solid tumor, ~~wherein the~~ comprising a pharmaceutical composition according to claim 41, ~~is combined with and a second~~ pharmaceutical composition comprising a precursor of an antitumor substance (P) which is converted into an antitumor substance by a protein (b) ~~that converts a precursor of an antitumor substance (P) into an antitumor substance, which is produced from the gene delivery vector comprised in the pharmaceutical composition.~~

43. (Previously presented) The kit of a pharmaceutical composition for treating a solid tumor according to claim 42, wherein the protein (b) that converts a precursor of an antitumor substance (P) into the antitumor substance is cytosine deaminase, and the precursor of an antitumor substance (P) is 5-fluorocytocine.

44. (Currently amended) A method for treating a solid tumor, ~~wherein~~ comprising using the pharmaceutical composition according to claim 41, ~~is used.~~

45. (Currently amended) A method for treating a solid tumor, ~~wherein~~ comprising using the kit of a pharmaceutical composition according to claim 42 ~~is used.~~

46. (Currently amended) A method for treating a solid tumor, ~~wherein~~ comprising using the kit of a pharmaceutical composition according to claim 43 ~~is used.~~